

(d) a beam sampler in the path of said conditioned marking beam;

(e) a beam steerer in the path of said marking beam for directing and focusing said marking beam onto a surface of [a] said multi-layered workpiece and for melting one of said at least one intermediate metallic layers and creating visible markings in said upper carbon layer without removing carbon or metal; and

([d]f) a materials handler for positioning [said] workpieces in the path of said marking beam.

Claim 2, line 3, change "a conditioned laser" to --said conditioned laser--;

Claim 2, line 3 change "beamsplitter to --beam splitter--.

Claim 3, line 1, after "wherein" insert --said beam sampler--;

Claim 3, line 1, change "comprising" to --comprises--;

Claim 3, line 2, delete "sampler and a".

Claim 5, line 1, change "selected" to --marking--;

Claim 5, line 2, after "form" insert --surface--;

Claim 5, line 4, before "detector" insert --beam--

Claim 6, line 2, change "anoptical" to --an optical--.

7 (Amended). A laser apparatus as recited in Claim [6] 1 wherein said beam steerer comprises a galvanometer for directing said marking beam [second optical plate is a quarter-wave plate].

Claim 11, line 1, change "selected" to --marking--;

Claim 11, line 2, after "form" insert --surface--.

46. A laser apparatus for writing visible surface deformations on a top surface of a multi-layered workpiece having a top layer and a plurality of intermediate metallic layers and a supporting substrate layer, comprising:

5 (a) one of said plurality of intermediate metallic layers having a lower melting temperature than the layer above it comprising a sublayer to be melted;

(b) a laser generator for generating a laser beam;

10 (c) a laser beam expander, and

(d) a laser beam collimator for generating a collimated marking beam;

(e) an optical attenuator for controlling the energy level of said collimated marking beam;

15 (f) a beam sampler for diverting a sample of said collimated marking beam;

(g) a beam steerer coupled to receive said collimated marking beam and for writing and directing a focused marking beam onto said multi-layered workpiece for
20 melting said sublayer to be melted and said sublayer creates visible ripples in the top layer of said multi-layered workpiece upon solidifying.

47. A laser apparatus as set forth in Claim 46 wherein said multi-layered workpiece comprises a magnetic
25 disk comprising a carbon top layer, a magnetic layer and intermediate metallic sublayer comprising nickel having a lower melting temperature than said top layer and said magnetic layer, and

visible ripples formed in said top layer by
30 melting said sublayer.

48. A laser apparatus as set forth in Claim 46 which further includes control means coupled to said beam

steerer and said beam sampler for controlling the intensity of said marking beam.

49. A laser apparatus as set forth in Claim 48 wherein said control means is coupled to said laser beam expander for controlling the size of the collimated marking beam.

50. A laser apparatus as set forth in Claim 46 wherein said upper layer comprises a lubricating layer on top of a carbon protective layer, and said marking beam evaporates said lubricating layer without contaminating said top layer.

51. A laser apparatus as set forth in Claim 50 wherein visible ripples appear in said carbon layer without removing any carbon.

REMARKS

Claims 1 to 13 were elected in a response to a requirement for restriction. Claims 14 to 45 are withdrawn from consideration in this application.

Claims 1 and 2, 5 and 9 to 13 were rejected under 35 USC 102(e) as allegedly being completely anticipated by Kobsa USPN 6,163,010. Kobsa's invention is used for laser cutting thin sheets of stainless steel (see Examples 1 and 2 at Col. 8). Kobsa teaches that cutting "creates a pool of molten material" (see Col. 2, lines 1 to 12). Kobsa teaches that his "laser beam is focused to a plane between the upper and the lower surface of the object, which either melts or vaporizes the material" that "is expelled by the laser beam from the object or a pressurized fluid flowing coaxially with the laser beam."